Industrial Communication Protocol for Remote Monitoring

The aim of this project is to develop an appropriate application software and application programming interface (API) to provide an automatic control of the environment.

The project is based on BACnet that can connect off-the-shelf sensors and PCs to work towards the goal of "intelligent buildings."

Hardware Connections
- PC & Router: Ethernet port
- Router & Controller: RS 485

Results
- New Function
  - Create Object Service: Create a new object in the router/controller
  - Delete Object Service: Delete an already existing object in the router/controller
  - Subscribe Change of Value Service: Subscribe for the receipt of notifications of changes that may occur to the properties of a particular object

Conclusion
By studying the BACnet network structure and BACnet protocol open source, we have developed an application software and an application programming interface that realize a generic real-time monitoring system. We have created several services that the open source did not support such as create object service and delete object service. The BACnet open source is still under development. Many services are still not...